

WHAT IS CLAIMED IS:

1. An apparatus comprising:
a device chip including circuit elements fabricated on a substrate;
a cap covering at least a portion of said device chip; and
gasket with treaded surface sealing said cap to said device chip.
2. The apparatus recited in claim 1 wherein said treaded surface includes tread cavities.
3. The apparatus recited in claim 1 wherein said device chip includes adhesive on which said gasket is attached.
4. The apparatus recited in claim 1 wherein said cap is cold-weld bonded onto said device chip.
5. The apparatus recited in claim 4 wherein gold is used as cold-welded metal.
6. The apparatus recited in claim 1 wherein said cap hermetically seals said circuit elements.
7. The apparatus recited in claim 1 wherein said gasket having a width in a range of four to 30 microns.
8. The apparatus recited in claim 1 wherein said gasket having a thickness in a range of five to 50 microns.
9. The apparatus recited in claim 1 wherein said tread having a width in a range of one to five microns.

10. The apparatus recited in claim 1 wherein said tread defines tread cavities, each tread cavity having a width ranging from one to five microns.
11. The apparatus recited in claim 1 wherein said tread defines tread cavities, each tread cavity having a depth in a range of one to three microns.
12. The apparatus recited in claim 1 wherein said tread defines tread cavities, each tread cavity having a length in a range of 10 to 50 microns.
13. The apparatus recited in claim 1 wherein said gasket is made from same material as said cap.
14. An apparatus comprising:
a device chip including a circuit elements;
a cap covering at least a portion of said device chip; and
said device chip having treaded surface adapted to seal said cap to said device chip.
15. The apparatus recited in claim 14 wherein said treaded surface includes tread cavities.
16. The apparatus recited in claim 14 further comprising gasket as a seal between said device chip and said gasket.
17. A method of fabricating an apparatus, the method comprising:
fabricating a device chip including circuit elements on a substrate;
enclosing said circuit elements using a cap and a gasket, said cap covering at least a portion of said device chip, and said gasket having treaded surface.

18. The method recited in claim 17 wherein said treaded surface includes tread cavities.
19. The method recited in claim 17 wherein said device chip includes adhesive on which said gasket is attached.
20. The method recited in claim 17 wherein said cap is cold-welded onto said device chip with gold.
21. The method recited in claim 17 wherein said cap and said gasket hermetically seals said circuit elements.